

## THIN FILM EL PANEL

## THIN FILM EL PANEL

Patent Number: JP2230690  
Publication date: 1990-09-13  
Inventor(s): OKAMOTO KENJI; others: 05  
Applicant(s): FUJITSU LTD  
Requested Patent:  JP2230690  
Application Number: JP19890052552 19890303  
Priority Number(s):  
IPC Classification: H05B33/10  
EC Classification:  
EC Classification:  
Equivalents:

---

### Abstract

---

PURPOSE: To enhance the luminance intensity and reliability by forming an EL light emitting layer as a thin film made by multi-element vapor deposition method using a vapor source consisting of light emitting layer constituting elements, and forming insulation layers provided on both sides of the light emitting layer as a thin film made by atomic layer epitaxial method.

CONSTITUTION: A transparent first insulation layer 13 which is 200Angstrom thick and made of Al<sub>2</sub>O<sub>3</sub> and others formed by atomic layer epitaxy using raw materials such as AlCl<sub>3</sub> is formed on the surface of a transparent electrode 12. An EL light emitting layer 15, 6000Angstrom thick, is provided being formed by multi-element vapor deposition method using for example multiple vapor source of Zn and S constituting light emitting mother material, and Mn to be a light emitting central layer, via a first intermediate insulation film 14 comprising Al<sub>2</sub>O<sub>3</sub>, Ta<sub>2</sub>O<sub>5</sub>, and others formed by sputtering or vapor deposition method. Back plates 18 at right angles to the transparent electrode 12 are disposed to form a matrix on the light emitting layer 15 via a second insulation layer which is 2000Angstrom thick and comprising a second intermediate insulation film 16 and Al<sub>2</sub>O<sub>3</sub>, etc., formed by atomic layer epitaxial method.